

Hampton Falls-Hampton 13408B

I-95 over the Taylor River



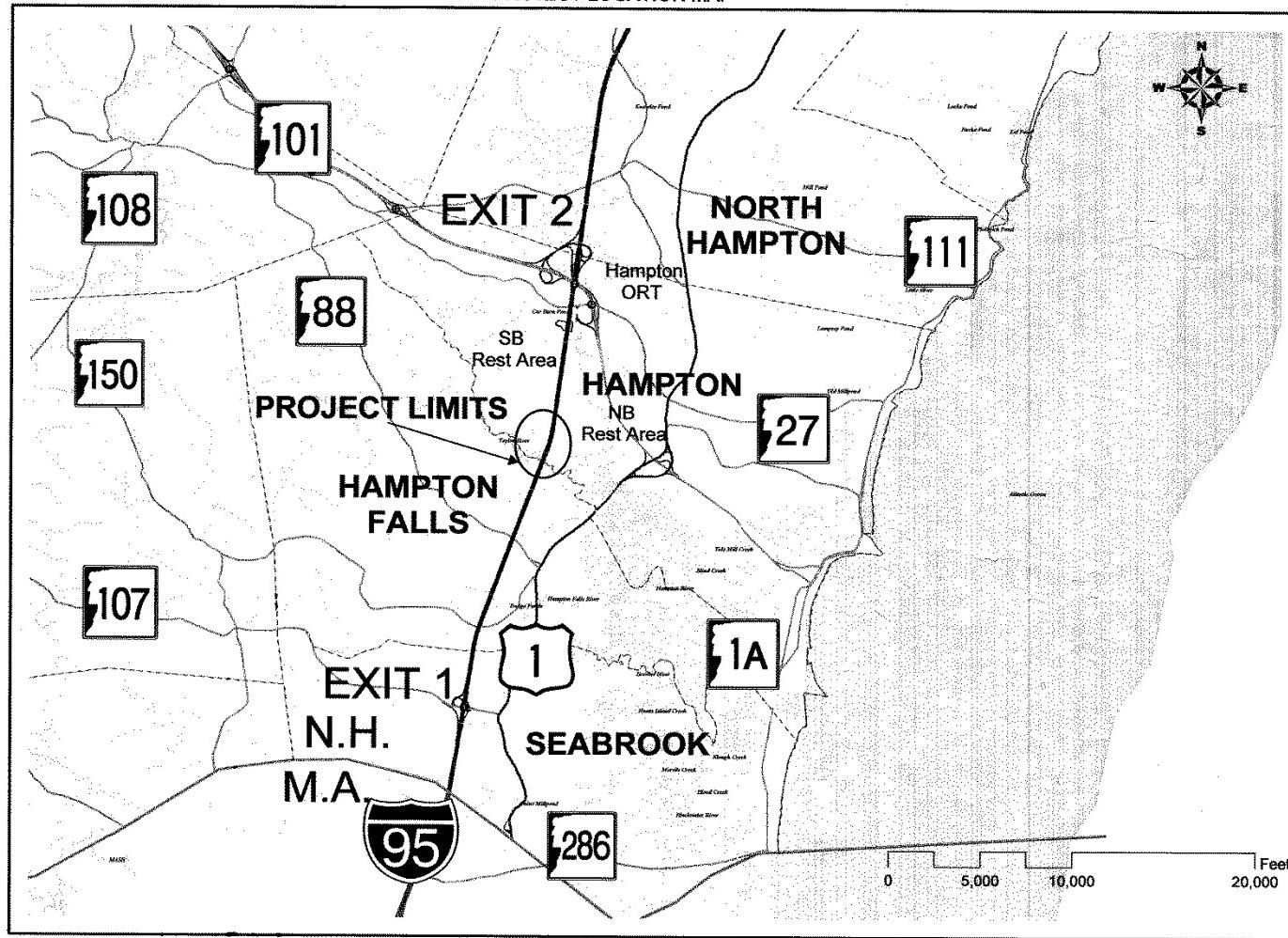
Public Informational Meeting
April 9, 2014
Hampton Falls

Meeting Agenda

- Welcome and Introductions
- Purpose of Meeting
- Project Goals
- Status Update
- Project Description
- Future Project - Dam

Hampton Falls - Hampton 13408B

PROJECT LOCATION MAP



Project Goals

- Replace Bridge
- Reduce Flooding
- Address Dam Condition
- Improve Water Quality
- Improve Fish Passage

Status Update

- Feasibility Study Completed June 2010
 - Scope of Project
 - Replace Bridge
 - Remove or Replace Dam
 - Identified Environmental Considerations
 - Several Public Meetings Held Between 2006-2010. Last Meeting June 15, 2010

Status Update

- Began Final Design August 2012
- Subsurface Explorations Led to Change in Bridge Location
- Re-initiated Discussions with Resource Agencies
- Initiated Sediment Transport Modeling
- Timeline Reevaluated

Status Update

- Recent Change → Project “De-Coupled”
 - Bridge and Dam are Separate Projects
 - Project 13408B Is Bridge Replacement
 - Bridge Replacement = Critical Need
 - Interim Measures to Modify Existing Spillway
 - Project 13408C is Evaluation of Dam

Status Update

- Bridge Project 13408B
 - Bridge, Flooding, Dam Condition
 - Construction Schedule: 2015 - 2018
- Dam Project 13408C
 - Dam, Water Quality, Fish Passage
 - Construction Schedule: 2018 - 2020

Project Description

- Existing Bridge
 - 15 Foot Span
 - Steel Sheet Piling Abutments & Concrete Slab Superstructure
 - Constructed 1950, Widened in 1974
 - Bridge on “Red List” Since 2011

Project Description

- Existing Bridge



Project Description

- Overflow Structure
 - Constructed During 1974 Widening
 - 8'-10" Span Corrugated Metal Pipe
 - Carries Water During Storm Events
 - Upstream Weir

Project Description

- Overflow Structure



Project Description

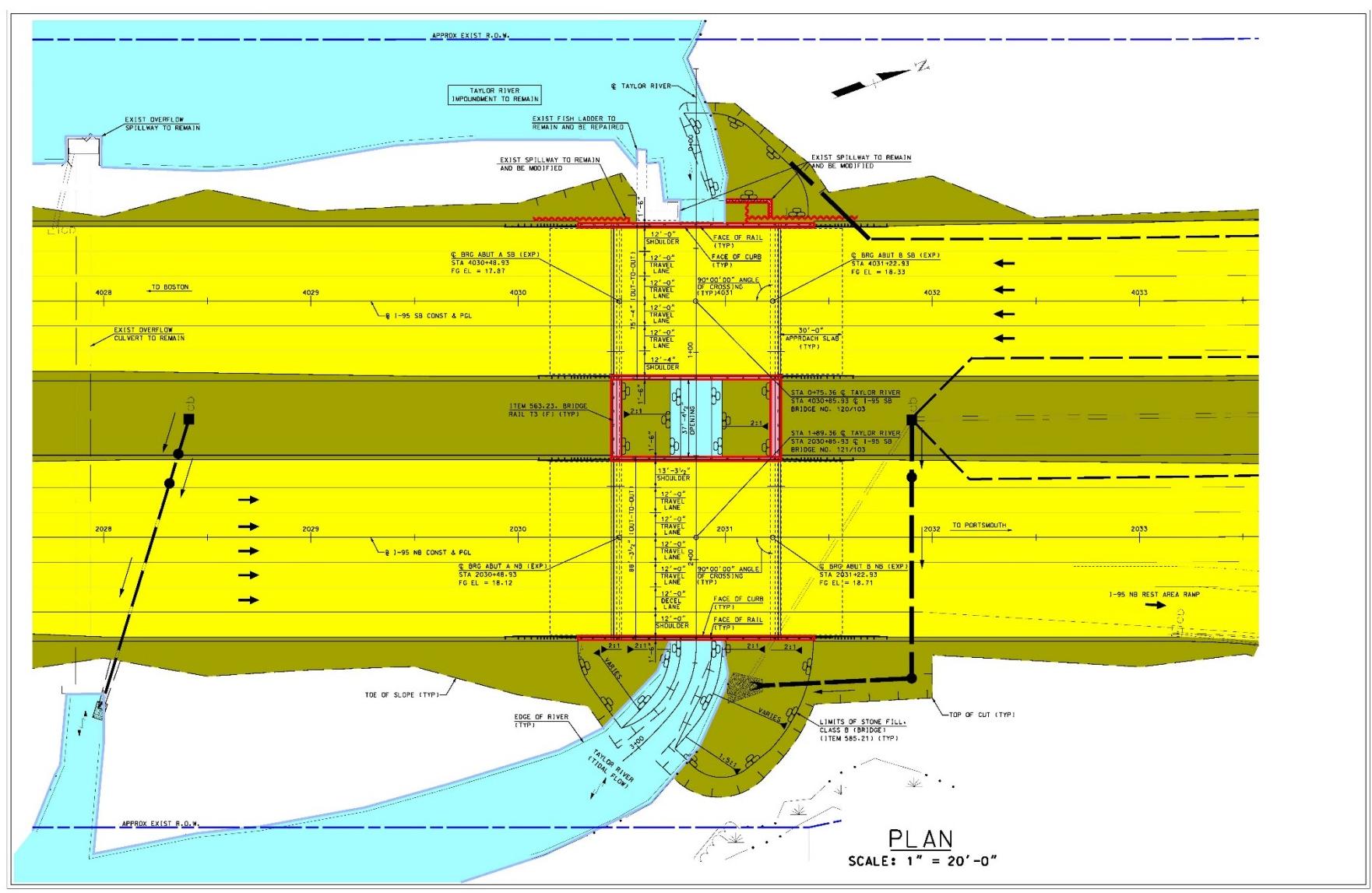
- Bridge Replacement
 - Replacement Bridge Location Moved 600 Feet North to Location of Existing Bridge

Reasons:

- Better Soils & Less Settlement
- Simplifies Traffic Control
- Reduces Costs & Duration

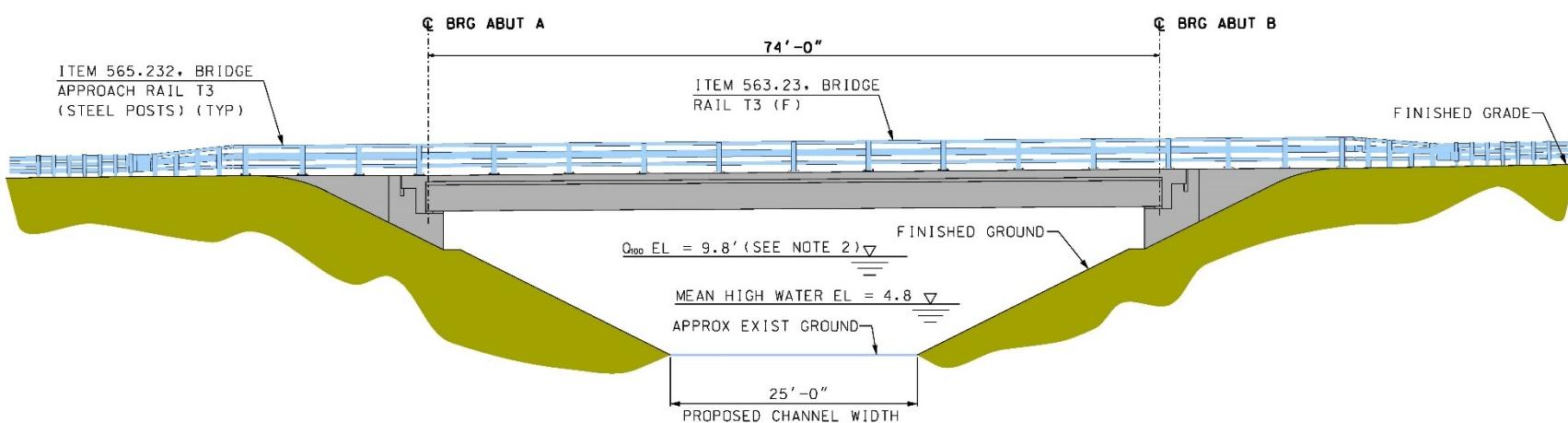
Project Description

- Bridge Replacement
 - 74 Foot Span NEXT Beam Superstructure
 - Pile Supported Abutments



**Hoyle, Tanner
& Associates, Inc.**





EAST ELEVATION (I-95 NORTHBOUND)
(BRIDGE NO 121/103)

HYDRAULIC DATA

- (1) DRAINAGE AREA: 10.8 SQ. MILES
- (2) DESIGN FLOOD: Q₁₀₀ = 2140 CFS
- (3) DESIGN VELOCITY: Q₁₀₀ = 4.1' (SEE NOTE 2)
Q₁₀₀ = 5.8' (SEE NOTE 3)
- (4) DESIGN FLOOD ELEVATION: Q₁₀₀ EL = 9.8' (SEE NOTE 2)
Q₁₀₀ EL = 8.5' (SEE NOTE 3)
- (5) BRIDGE WATERWAY OPENING: 437 SQ. FT. BELOW Q₁₀₀ ELEVATION 9.8'

NOTES

- (1) HYDRAULIC DATA IS BASED ON MODIFIED SPILLWAY CONSTRUCTION.
- (2) DESIGN FLOOD ELEVATION AND VELOCITY IS BASED ON ATLANTIC OCEAN TIDAL STILLWATER ELEVATION OF 9.2 FEET (STORM SURGE).
- (3) DESIGN FLOOD ELEVATION AND VELOCITY IS BASED ON ATLANTIC OCEAN TIDAL STILLWATER ELEVATION OF 4.8 FEET (MEAN HIGH WATER ELEVATION).

Project Description

- Traffic Control
 - Maintain 4 Lanes NB and SB
 - Maintain Access to NB & SB Liquor Stores
 - Utilize Median Diversions to Shift Traffic
 - 3-Phases of Bridge Construction

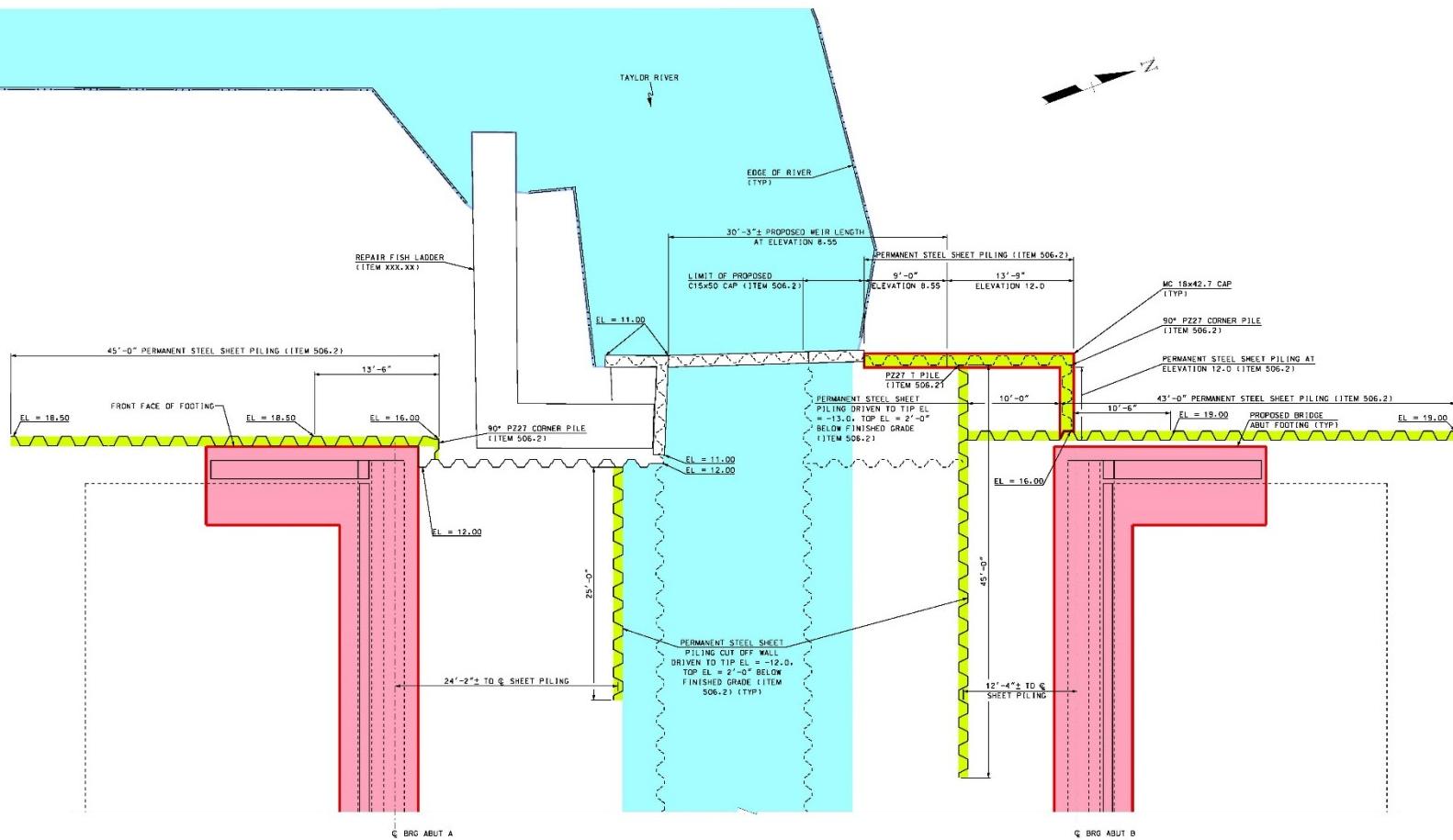
Project Description

- Existing Spillway
 - Steel Sheet-Piling
 - Concrete Fish-Ladder



Project Description

- Interim Modifications to Spillway
 - Modifications Necessary to Accommodate Larger Bridge Opening
 - Extensions Consist of Steel Sheet-Piling
 - Replacement of “Slats” in Fish-Ladder
 - Will Improve Flood Flow Through Bridge
 - Reduces Pond Water Surface Elevation in Large Storm Events



SPILLWAY MODIFICATION PLAN

Project Description

- Environmental Summary
 - Resource Meetings
 - Permits
 - Water Quality
 - Cultural Resources
 - Fisheries
 - Rare Species
 - Documentation

Project Description

- Right-of-Way (R.O.W.)
 - All Work for 13408B Within R.O.W.
 - No Easements or Acquisitions Required

Project Description

- Schedule
 - Permit Application May/June 2014
 - Finalize Design by December 2014
 - Advertise Project May 2015
- Estimated Cost 13408B = \$11M +/-

Future Project - Dam

- Remove or Replace?
 - Sediment Transport and Hydraulic Modeling
 - Resource Agency Coordination
 - Public Hearing(s) Prior to Making Decision

Questions?

Contact Information:
Peter Stamnas, P.E.– Project Manager
NHDOT-Highway Design
603-271-3909
pstamnas@dot.state.nh.us